Release Date: October 9, 2014
Proposal Due: November 7, 2014

Vermont Agency of Agriculture, Food and Markets and the
Vermont Department of Environmental Conservation

Request for Proposals: Development of a Nutrient Trading Initiative in the Lake Champlain Basin

Submittal Deadline: 4:30pm, EST, **Friday, November 7, 2014**

RFP Contact: David Pasco, VDEC, david.pasco@state.vt.us, (802) 490-6112

1. Project Announcement

The State of Vermont Agency of Agriculture, Food and Markets (VAAFM) and the Vermont Department of Environmental Conservation (VDEC) are seeking proposals to prepare a phosphorus trading feasibility study and framework for potential application in the Vermont side of the Lake Champlain Basin.

The term of the contract agreement is for a period of ten (10) months with a project completion date of September 30, 2015. We anticipate executing the agreement on or before November 21, 2014.

2. Project Goals

The goals of the project are to evaluate market-based strategies to help the State of Vermont:

- Achieve the overall phosphorus pollution reduction targets of the Lake Champlain Total Maximum Daily Load (TMDL) in a cost-effective manner;
- Reduce costs of the regulated sector in meeting pollutant discharge limits;
- Establish incentives for voluntary phosphorus load reductions above baseline water quality requirements; and,
- Accommodate continued growth and economic development.

3. General Project Description

Vermont is requesting proposals to prepare a feasibility study and framework for a phosphorus reduction trading initiative in the Vermont portion of the Lake Champlain Basin.

There is a growing interest and experience nationwide in using water quality trading strategies to improve water quality. Some of the more common nutrient trading strategies include offsets, reverse auctions, trading that involve bi-lateral negotiations, and exchange markets.
An offset-based system program involves a regulated pollutant source paying a fee or obtaining pollutant reductions on land not owned or managed by that source that can be credited towards meeting its required pollutant reduction permit limit. Offsets may also involve a new

or expanding regulated source paying a fee or obtaining pollutant reductions to compensate for its anticipated increased discharge to an impaired waterbody.

A “reverse auction” bidding system, also referred to as a procurement auction, relies on competition among multiple “sellers” of nutrient pollutant load reduction credits. Sellers, such as agricultural producers, submit bids to implement nutrient reduction credits associated with best management practice (BMP) installation to the administering agency. The agency acts as a credit clearinghouse, buying pollutant reduction credits and transferring them to point sources. Theoretically, a bid represents a minimum compensation the seller is willing to accept in order to implement practices that generate the credit. The agency ranks the bids according to criteria, such as performance expectations and cost-effectiveness, and selects bids to implement priority projects that best meet environmental objectives. (See Attachment A for some additional sources of information.)

Bi-lateral negotiation involves purchasing and selling quantifiable nutrient pollutant load reduction credits directly between involved parties. An exchange market approach functions similarly to the New York Stock Exchange, where pollution credits are standardized exchanged between buyers and sellers in an organized manner.

The State of Vermont is interested in these innovative strategies to achieve phosphorus pollutant load reductions, especially in the Missisquoi Bay, St. Albans Bay, and the Otter Creek watersheds within the Lake Champlain Basin which are experiencing higher phosphorus pollutant loading from agricultural runoff. These approaches may also be attractive to wastewater treatment plant operators and other regulated entities seeking cost-effective ways to meet and maintain existing and future permitted nutrient pollution load limits prescribed in their National Pollutant Discharge Elimination System (NPDES) or state permits. Agricultural producers may also be interested in participating to secure financial assistance in implementing BMPs to reduce nonpoint source runoff and erosion.

4. Background: Restoration of Lake Champlain Basin

Lake Champlain Basin is an 8,234 square mile watershed, draining nearly half of the land area of Vermont, as well as parts of New York and Quebec. The principle water quality concern is nutrient enrichment, particularly high levels of phosphorus. Phosphorus pollution is one of the greatest threats to clean water in Lake Champlain. Phosphorus is a nutrient that stimulates excessive growth of algae in the lake which can impair recreational uses, aesthetic enjoyment, the taste of drinking water, and the biological community. In some cases, algal blooms – particularly cyanobacteria or blue-green algae - can produce toxins that harm animals and people.

Section 303(d) of the federal Clean Water Act requires states to develop a Total Maximum Daily Load (TMDL) for water bodies that do not currently meet water quality standards. In 2002, the U.S. Environmental Protection Agency (USEPA) approved a Lake Champlain Phosphorus TMDL prepared by the states of Vermont and New York to address the Lake’s phosphorus impairment. The TMDL placed a cap on the amount of phosphorus allowed to enter Lake Champlain, and allocated that maximum amount among the various sources, both “point” and

"nonpoint," within each major watershed draining to the Lake. This cap is comprised of two components – the "wasteload allocation" which describes the amount of phosphorus reductions required from point source discharges, and the "load allocation" which describes the amount of phosphorus reduction required from nonpoint sources.[1]

The EPA revoked its approval of the Vermont portion of the Lake Champlain TMDL in 2011. (The New York portion of the 2002 TMDL remains in effect.) EPA is currently in the process of developing a new TMDL, which will include new phosphorus allocations for both point and nonpoint sources. We anticipate the release of the final TMDL in the fall of 2014.

The most significant point sources in Vermont are wastewater facilities. Upon completion of the new TMDL, new permits for these facilities will be issued, containing waste load allocations for each facility. There are 94 such direct discharge facilities in the Vermont portion of Lake Champlain. However, these sources, in aggregate, represent, approximately three percent of the phosphorus loading to Lake Champlain.

Other sources subject to regulation under the NPDES include stormwater discharges from municipal separate storm sewer systems (MS4s), combined sewer overflows (CSOs), construction stormwater discharges, multi-sector stormwater discharges, concentrated animal feeding operations (CAFOs), or, under the Clean Water Act's Residual Designation Authority (RDA), other discharges that contribute to a water quality impairment.

Agriculture represents one of more significant nonpoint sources of nutrient pollution. Dairy farms, particularly in the Lake Champlain Basin, continue to represent a significant percentage of the working landscape. Vermont is the largest dairy producing state in New England, accounting for over 62% of New England's milk production, and Lake Champlain Basin is home to the majority of dairy farms in the state. Two counties in the Lake Champlain Basin – Franklin and Addison Counties − rank among the highest milk producing counties in the Northeast Federal Milk Marketing Area. Vermont Dairy products account for over $580 million in agricultural sales, providing 7,500 jobs. (Gross sales of dairy products total $1.2 billion per year).

Mapping of "critical sources areas" (CSAs) − areas that pose the highest risk of contributing phosphorus loadings − provides important information for prioritizing the type and location of agricultural BMPs. The International Joint Commission (IJC) commissioned a study, released in January, 2012, that identified CSAs within the Vermont portion of the Missisquoi River watershed. The study also found that targeting implementation of BMPs in these areas is up to three times more effective than traditional voluntary sign-ups. (See: http://www.ijc.org/files/publications/HH5.pdf.) The VAAFM is creating agricultural CSA maps for the Otter Creek watershed, and the Northwest Regional Planning Commission has a grant from the VDEC Ecosystem Restoration Program to map CSAs within St. Albans Bay watershed.

[1] Point sources include discharges from pipes or other discrete conveyances (e.g., discharges from wastewater treatment facilities or channelized municipal stormwater runoff). Non-point sources include more diffuse overland discharges to waters, such as runoff from agricultural fields, developed lands and back roads, and from stream erosion due to channelization and increased runoff from developed lands.

The new Lake Champlain phosphorus TMDL under development will include additional actions across all land uses to reduce nonpoint source runoff. Moreover, higher nutrient loading from agricultural runoff in three of Lake Champlain Basin's watersheds – Missisquoi Bay, St. Albans Bay, and South Lake – will require additional control measures.

Upon completion of the TMDL, a significant challenge will be how to reduce nutrient loading and achieve pollution targets in the most cost-effective manner possible. Thus, the time is right to undertake a study of the policy and practical elements of a market-based strategy in Vermont, specifically in Lake Champlain Basin.

5. Scope of Work

VAAFM and VDEC seek proposals to provide the personnel, equipment, and services to prepare the following four deliverables of this project, which are to be packaged into a final report. Please include in the proposal's budget information pertaining to cost per task for each of the four deliverables:

1) Analyze Nutrient Trading Strategies and Recommend One Strategy for Applicability in the Vermont Portion of Lake Champlain Basin:
   Provide an analysis of three trading strategies and recommend an option that offers the most potential for reducing phosphorus pollution loading in the Vermont portion of Lake Champlain Basin. Two of the three strategies should include a credit offset program and a water quality credit clearinghouse with a reverse auction bidding system. The analysis should evaluate the practicality, benefits, and limitations. Criteria for evaluating these options may include but are not limited to: (a) adequate number of participants (buyers and sellers of phosphorus pollutant reduction credits); (b) likelihood of success in achieving desired phosphorus pollutant reduction goals from nonpoint sources, based on experiences in Vermont and other jurisdictions; (c) applicability and likelihood of success of the strategy in a large watershed, such as the Lake Champlain Basin, where: (i) nonpoint sources are responsible for the most of the nutrient pollutant loads, and, (ii) nutrient pollutant load reductions must be achieved across many source sectors as part of the Lake Champlain phosphorus TMDL to meet water quality standards; (d) legal and policy considerations to support a market-based approach in Vermont; and, (e) administrative or transaction costs to administer the program, including practice implementation, validation of pollutant reduction credits, and the monitoring or tracking of practice function over time.

2) Feasibility Study and Market Analysis of the Recommended Trading Program:
   The State of Vermont is interested in the merits of a trading program that can potentially generate the greatest environmental outcome at a minimal cost. The scope of this RFP involves conducting a feasibility study and market analysis of the recommended trading strategy (an outcome of the first task described above) pertaining to the Vermont portion of the Lake Champlain Basin. This deliverable comprises of the following steps:
   a) Evaluate agricultural nonpoint sources to determine whether there is an adequate supply of phosphorus reduction credits associated with BMPs that are above a regulatory baseline standard;

b) Identify the potential phosphorus load reduction credit "sellers" and "buyers" (including both point and non-point sources);
c) Assess how CSA maps for the Missisquoi Bay, the Otter Creek, and St. Albans Bay watersheds can be used to target greater phosphorus pollutant reductions as part of the trading program;
d) Provide recommendations on how to build capacity for sellers to participate in the trading program;
e) Determine the sources of funding (state, federal, municipal, private, other) to support the trading program. Consider credit offsets as a potential funding source by assessing how regulated point sources of phosphorus pollution (e.g., municipal wastewater treatment plants, MS4 communities, and other regulated sources) could become potential phosphorus load reduction credit "buyers" in the program;
f) Estimate the economic benefit of a trading program by comparing the differences in control costs between point source phosphorus pollutant load controls (considering capital, operation, and maintenance costs) and agricultural nonpoint source BMPs that are above the regulatory baseline standard;
g) Specify all administrative costs, including transaction and monitoring costs, to administer the program;
h) Analyze the cost savings and load reductions over a 20-year planning horizon that could be achieved through this market-based program, when compared to the expense of traditional regulatory approaches; and,
i) Recommend an accounting system or provide estimates for developing or acquiring an accounting system or database to administer the program, including verifying, tracking, and managing credits, reporting, maintenance of the accounting system, and liability and recovery of funds from failed projects.

3) Market-Based Framework of the Recommended Trading Program:

A framework for a trading program in the Vermont portion of the Lake Champlain Basin is to contain the following components:

a) Describe watershed considerations, including geographic scope (or market area boundaries) and timing of implementation, for ease in implementation and to avoid uneven accumulation of nutrient pollution that could contribute to local water quality degradation;
b) Identify baseline standards – the eligibility threshold for participants in a market-based system. The baseline is often represented as the reference level of discharge or pollutant load, based on compliance with existing regulatory requirements, above which to measure marketable credits;
c) Define agricultural nonpoint source BMPs (type, sizes, locations), above the baseline standard, that would be eligible for credit, such as new and expanded annual field-based practices;
d) Recommend ways to manage for uncertainty, including the potential application of trading ratios (which may increase demand for pollutant credits or offsets);
e) Describe whether and how pollutant reduction credits can be "banked," and sold as offsets to other point and nonpoint sources of nutrient pollution;
f) Establish the rules for participation, bid development, and the funding allocation process, including criteria such as cost-effectiveness (dollar per pound of phosphorus

reduced), quality of application data, and sustainability of practices, for bid development and selection;

g) Recommend a process to guard against bid or credit price "rigging," in which sellers act either independently or collude among themselves to artificially elevate the value of their credits or bids;
h) Provide recommendations for program administration, including the role of a potential third party broker to inspect and verify actions;
i) Recommend the process to track and report outcomes; and,
j) Recommend legal and policy considerations to support a market-based approach that allows for regulated point sources to pay for pollutant reductions from nonpoint sources, where cost-effective.

4) Stakeholder Participation:
The following step is to begin to build support for a trading program among potential participants and other stakeholders:

a) Identify stakeholders and conduct a minimum of four public awareness and engagement meetings. The intent of these meetings is to raise awareness, describe the benefits to participants, discuss and receive feedback on the feasibility strategy and the market framework, describe the development of potential demonstration projects, and determine next steps; and,
b) Develop a pilot project, targeting a limited geographic scope or watershed, to gain experience with a trading program.

6. Contract Period

Contract arising from this request for proposal will be for a period of 10 months. Projects must be initiated within 30 days of contract signing by the Vermont Department of Environmental Conservation Commissioner.

7. Funding

Funding for this contract is contingent on the availability of funds. It is anticipated that the State will have up to $100,000 for this project.

8. Contract Provisions

Respondents to this RFP should be aware that they will need to agree to the State of Vermont Customary Contract Provisions in order to execute a contract for this project. These provisions, which include insurance requirements, are attached to this RFP for reference (Attachment C).

9. Content of Proposals

All proposals must include the following information:

- A statement identifying individuals who were involved in the preparation of the proposal as well as a single point of contact;

- A brief description of the company or individual's primary business, including years in operation and any prior experience with market-based approaches to reduce nutrient pollutant loadings to surface waters;
- The names, addresses and phone numbers of at least three references with whom you have transacted services in the last 36 months. Indicate whether the services you provided these references were similar in scope. Include contact names who can talk knowledgeably about performance;
- A scope of work and project budget for each of the four deliverables, including cost per task described as part of each deliverable. The budget should provide hourly rate information per deliverable. Estimate the maximum total cost with a breakout of:
    - Fees for staff time, showing the level of staff to be assigned, titles, hourly rates and estimated number of hours.
    - Travel expenses, including transportation costs, lodging, and subsistence.
    - Detailed analyses for all overhead and other costs, including purchase of the laptop computer.

10. Method of Payment

The contractor shall submit invoices outlining completed performance measures and associated costs for payment.

11. Criteria for Selection

Proposals will be reviewed and evaluated by two or more State agency staff members. Selection of a contractor will be based on the following criteria:

- Qualifications and experience of the investigator(s) and staff that will perform the work regarding the four deliverables (up to 25 points);
- Recommendations from references (up to 10 points);
- Unit hourly rates of the project proposal team, including administrative support (up to 10 points);
- Understanding of the work to be performed and proposed work plan; itemized tasks and performance deliverables (up to 30 points);
- Detailed schedule and expected completion date (up to 15 points);
- Costs by task (up to 10 points).

12. Proposal Submittals

Completed proposals must be submitted in electronic format (Portable Document Format (PDF) preferred), clearly marked, and emailed to David Pasco (david.pasco@state.vt.us). The **deadline to receive submissions is 4:30 pm on Wednesday, November 7, 2014**. Proposals must be received by this date and time to be considered. Late proposals will be disqualified.

The State of Vermont reserves the right to reject any and all proposals that are submitted, and to request additional information from the organizations submitting proposals. The selected proposal will be deemed the best proposal based on all technical and cost considerations.

13. RFP Questions

All questions pertaining to the RFP should be submitted to David Pasco no later than Friday, October 24, 2014 by 4:30pm. All questions received during this period and their answers will be posted to the Vermont Business Registry Bid System along with this RFP by 4:30 pm on October 28, 2014.

14. Point of Contact

All communications concerning this Request for Proposal (RFP) are to be addressed to the attention of: David Pasco, Vermont Department of Environmental Conservation, david.pasco@state.vt.us

14. Attachments

Attachment A: Sources of Information on Trading
Attachment B: Definitions
Attachment C: Standard State Provisions for Contracts

Attachment A: Sources of Information on Trading

An Economic Comparison of the USDA-NRCS Environmental Quality Incentives Program Payments and Water Quality Credit Trading in the Great Miami River Watershed of Ohio. December 31, 2008. Prepared for the Miami Conservation District by Kieser & Associates. http://www.envtn.org/uploads/EQIP_WQT_GMR2008.pdf

Breetz, H.L., K. Fisher-Vanden, L. Garzon, H. Jacobs, K. Kroetz and R. Terry. 2004. Water Quality Trading and Offset Initiatives in the U.S.: A Comprehensive Survey. Dartmouth College, Hanover, New Hampshire. http://www.watershedconnect.com/documents/files/water_quality_trading_and_offset_initiatives_in_the_united_states_a_comprehensive_survey.pdf

Conservation Technology Information Center. 2006. Getting Paid for Stewardship: An Agricultural Community Water Quality Trading Guide. West Layfayette, IN: Conservation Technology Information Center (CTIC).

Dennison, W., M. Helfrich, E. Michelsen, R. Pritzlaff and F. Tutman. 2012. Nutrient Trading; Preliminary Investigation: Findings and Recommendations. Senior Scientists and Policymakers for the Bay Nutrient Trading Subcommittee. Chesapeake Bay Action Plan. www.bayactionplan.com.

Greenhalgh, Suzie, Mindy Selman, Jenny Guiling and Jonathan St John, 2006, Paying for Environmental Performance: Investing in Producers and the Environment. WRI Policy Note, Environmental Markets No 1, Washington DC.

Greenhalgh, Suzie, Mindy Selman, Jenny Guiling and Jonathan St John, 2007, Paying for Environmental Performance: Using reverse auctions to allocate funding for conservation. WRI Policy Note, Environmental Markets: Farm Bill Conservation Programs No. 3, Washington DC. http://www.wri.org/publication/paying-for-environmental-performance-reverse-auctions

Identification of Critical Source Areas of Phosphorus within the Vermont Sector of the Missisquoi Bay Basin, December 2011. Prepared for the Lake Champlain Basin Program by Stone Environmental Inc. and R. Schiff, Milone and MacBroom, Inc.: http://www.lcbp.org/techreportPDF/63B_Missisquoi_CSA.pdf

International Joint Commission. International Missisquoi Bay Study Board: Missisquoi Bay Critical Source Area Study, February 15, 2012. http://www.ijc.org/files/publications/HH5.pdf

King D.M., P.J. Kuch (2003) Will Nutrient Credit Trading Ever Work? An Assessment of Supply and Demand Problems and Institutional Obstacles. Environmental Law Reporter 33: 10352-10368. http://colowqforum.org/pdfs/water-quality-trading/documents/Will%20Nutrient%20Trading%20Ever%20Work.pdf

Selman, Mindy, Suzie Greenhalgh, Michael Taylor, Jenny Guiling, 2008, Paying for Environmental Performance: Potential Cost Savings Using a Reverse Auction in Program Signup. WRI Policy Note, Environmental Markets: Farm Bill Conservation Programs No. 5, Washington DC. http://www.wri.org/publication/paying_for_environmental_performance_reverse_auctions_in_program_signup

Shortle, J.S. 2013. Economics and environmental markets: Lessons from water-quality trading. Agricultural and Resource Economics Review 42(1): 57-74.

Stephenson, K., D. Parker, C. Abdalla, L. Shabman, J. Shortle, C. Jones, B. Angstadt, D. King, B. Rose, and D. Hansen. 2009. Evaluation Framework for Water Quality Trading Programs in the Chesapeake Bay Watershed. Mid-Atlantic Water Program and Scientific and Technical Advisory Committee (CBP): http://www.chesapeake.org/stac/Pubs/nutrient%20trading%20evaluation.pdf

U.S. Department of Agriculture (USDA) site on Water Quality Markets: http://www.usda.gov/oce/environmental_markets/water.htm

U.S. Environmental Protection Agency, Office of Water, August 2007. Updated June 2009. *Water Quality Trading Toolkit for Permit Writers*. EPA-833-R-07-004 Washington, DC: Office of Water, USEPA. http://water.epa.gov/type/watersheds/trading/WQTToolkit.cfm

U.S. Environmental Protection Agency, Office of Water, January 2003. *Water Quality Trading Policy*. http://www.epa.gov/owow/watershed/trading/finalpolicy2003.html

Vermont Department of Environmental Conservation (VTDEC). 2005. Chapter 18: Stormwater Management Rule in *Environmental Protection Rules*. http://www.vtwaterquality.org/stormwater/docs/sw_rule-unimpaired.pdf

Wabash River Watershed Water Quality Trading Feasibility Study. Prepared for the U.S. Environmental Protection Agency by Conservation Technology Information Center with support from Tetra Tech, Inc. and Kieser & Associates, LLC (September 2011). http://www.ctic.org/media/pdf/Wabash%20WQT%20Feasibility%20Study_091411_final%20report.pdf

Water Conservation Subdistrict, the Miami Conservation District. 2005. Great Miami River Watershed Water Quality Credit Trading Program Operations Manual. https://www.miamiconservancy.org/water/documents/TradingProgramOperationManualFeb8b2005secondversion.pdf

Wisconsin Department of Natural Resources. "A Water Quality Trading Framework for Wisconsin: A Report to the Natural Resources Board," July 1, 2011. http://fyi.uwex.edu/wqtrading/files/2011/07/WQT-Framework-Final.pdf

Woodward, R.T., R.A. Kaiser, and A.B. Wicks. 2002. The Structure and Practice of Water Quality Trading Markets. Journal of the American Water Resources Association. Volume 38, Number 4, Pages 967-979.

Attachment B: Definitions

(1) “Agency” (or VAAFM) means the Vermont Agency of Agriculture, Food and Markets.

(2) “Basin” means the land area that drains into a large water body.

(3) “Best Management Practice” or “BMP” means a schedule of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce water pollution.

(4) “Clean Water Act” means the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq).

(5) “Contractor” means the person submitting a bid under this Request for Proposal.

(6) “Credit” means a unit of an amount (or mass) of a pollutant that is prevented or reduced over a specified time period, through implementation of a management practice as part of a market-based program. The amount of pollutant reduction is in excess of the pollutant reduction required by a regulatory permit.

(7) “Critical Source Areas” mean areas within a watershed that are at risk to disproportionally contribute phosphorus pollutant loadings.

(8) “Department” (or VDEC) means the Vermont Department of Environmental Conservation.

(9) “Water Quality Offset” means a reduction in pollutant loading to compensate for a discharge made elsewhere.

(10) “Nonpoint Source” means a source that does not meet the Clean Water Act’s legal definition of point source. Examples include runoff from developed area, construction sites, and agricultural operations.

(11) “Nutrient Trading” means a market-based approach to achieve nutrient reduction targets more efficiently.

(12) “Offset” means either: (i) a practice implemented by a regulated point source at a site not owned or managed by that source to meet its regulatory requirement or permit limit; or, (ii) a state-permitted action or project within a subwatershed of an impaired water body that a regulated discharger may complete. The action or project is designed to mitigate the impacts associated with an existing or proposed discharge that the permitted point source has or is expected to have on the impaired water body.

(13) “Point Source” means “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.” 33 U.S.C. § 1362(14).

(14) “Residual Designation Authority,” under 40 C.F.R. §122.26(a), provides that a NPDES permit may be required if: (9)(i)(C) The Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that stormwater controls are needed for the discharge based on wasteload allocations that are part of “total maximum daily loads” (TMDLs) that address the pollutant(s) of concern; or(D) The Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge, or category of discharges within a geographic area, contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(15) “Reverse Auction,” also referred to as a procurement auction,” involves multiple sellers that compete to sell pollutant credits to a single buyer.

(16) “Study” means the cumulative number of evaluations requiring completion that are presented in this request for proposal.

(17) “Total Maximum Daily Load or TMDL” means the calculations and plan for meeting water quality standards approved by the U.S. Environmental Protection Agency (EPA) and prepared pursuant to the Federal Clean Water Act, 33 U.S.C. 1313(d), and federal regulations adopted under that law.

(18) “Trading ratio” means a unit of pollutant reduced from a nonpoint source in relation to a unit of pollutant that would be required to be reduced from a regulated point source that uses on-site treatment action or upgrade. Trading ratios are a way of addressing uncertainty associated with expected reductions from nonpoint source controls. A trading ratio establishes a greater uncertain value of nutrient pollutant load reduction from the nonpoint source than a known and more readily quantifiable value of the nutrient pollutant load reduction from the “end-of-pipe” point source.

(19) “Vermont Water Quality Standards” mean the rules that determine how clean and healthy a surface water body must be. The standards classify each waterbody, establish uses (e.g., swimming, recreation, public water supply, propagation of fish and wildlife) that must be protected, and set minimum chemical, physical and biological criteria that must be met to protect those uses: http://www.watershedmanagement.vt.gov/rulemaking/htm/rules.htm.

(20) “Watershed” means the total area of land contributing runoff to a specific point of interest within a receiving water.

ATTACHMENT C: STANDARD STATE PROVISIONS
FOR CONTRACTS AND GRANTS

1. **Entire Agreement:** This Agreement, whether in the form of a Contract, State Funded Grant, or Federally Funded Grant, represents the entire agreement between the parties on the subject matter. All prior agreements, representations, statements, negotiations, and understandings shall have no effect.

2. **Applicable Law:** This Agreement will be governed by the laws of the State of Vermont.

3. **Definitions:** For purposes of this Attachment, "Party" shall mean the Contractor, Grantee or Subrecipient, with whom the State of Vermont is executing this Agreement and consistent with the form of the Agreement.

4. **Appropriations:** If this Agreement extends into more than one fiscal year of the State (July 1 to June 30), and if appropriations are insufficient to support this Agreement, the State may cancel at the end of the fiscal year, or otherwise upon the expiration of existing appropriation authority. In the case that this Agreement is a Grant that is funded in whole or in part by federal funds, and in the event federal funds become unavailable or reduced, the State may suspend or cancel this Grant immediately, and the State shall have no obligation to pay Subrecipient from State revenues.

5. **No Employee Benefits For Party:** The Party understands that the State will not provide any individual retirement benefits, group life insurance, group health and dental insurance, vacation or sick leave, workers compensation or other benefits or services available to State employees, nor will the state withhold any state or federal taxes except as required under applicable tax laws, which shall be determined in advance of execution of the Agreement. The Party understands that all tax returns required by the Internal Revenue Code and the State of Vermont, including but not limited to income, withholding, sales and use, and rooms and meals, must be filed by the Party, and information as to Agreement income will be provided by the State of Vermont to the Internal Revenue Service and the Vermont Department of Taxes.

6. **Independence, Liability:** The Party will act in an independent capacity and not as officers or employees of the State.

   The Party shall defend the State and its officers and employees against all claims or suits arising in whole or in part from any act or omission of the Party or of any agent of the Party. The State shall notify the Party in the event of any such claim or suit, and the Party shall immediately retain counsel and otherwise provide a complete defense against the entire claim or suit.

   After a final judgment or settlement the Party may request recoupment of specific defense costs and may file suit in Washington Superior Court requesting recoupment. The Party shall be entitled to recoup costs only upon a showing that such costs were entirely unrelated to the defense of any claim arising from an act or omission of the Party.

   The Party shall indemnify the State and its officers and employees in the event that the State, its officers or employees become legally obligated to pay any damages or losses arising from any act or omission of the Party.

7. **Insurance**: Before commencing work on this Agreement the Party must provide certificates of insurance to show that the following minimum coverages are in effect. It is the

responsibility of the Party to maintain current certificates of insurance on file with the state through the term of the Agreement. No warranty is made that the coverages and limits listed herein are adequate to cover and protect the interests of the Party for the Party's operations. These are solely minimums that have been established to protect the interests of the State.

Workers Compensation: With respect to all operations performed, the Party shall carry workers' compensation insurance in accordance with the laws of the State of Vermont.

General Liability and Property Damage: With respect to all operations performed under the contract, the Party shall carry general liability insurance having all major divisions of coverage including, but not limited to:

Premises - Operations

Products and Completed Operations

Personal Injury Liability

Contractual Liability

The policy shall be on an occurrence form and limits shall not be less than:

$1,000,000 Per Occurrence

$1,000,000 General Aggregate

$1,000,000 Products/Completed Operations Aggregate

$ 50,000 Fire/ Legal/Liability

Party shall name the State of Vermont and its officers and employees as additional insureds for liability arising out of this Agreement.

Automotive Liability: The Party shall carry automotive liability insurance covering all motor vehicles, including hired and non-owned coverage, used in connection with the Agreement. Limits of coverage shall not be less than: $1,000,000 combined single limit.

Party shall name the State of Vermont and its officers and employees as additional insureds for liability arising out of this Agreement.

8. **Reliance by the State on Representations:** All payments by the State under this Agreement will be made in reliance upon the accuracy of all prior representations by the Party, including but not limited to bills, invoices, progress reports and other proofs of work.

9. **Requirement to Have a Single Audit:** In the case that this Agreement is a Grant that is funded in whole or in part by federal funds, the Subrecipient will complete the Subrecipient Annual Report annually within 45 days after its fiscal year end, informing the State of Vermont whether or not a Single Audit is required for the prior fiscal year. If a Single Audit is required, the Subrecipient will submit a copy of the audit report to the granting Party within 9 months. If a single audit is not required, only the Subrecipient Annual Report is required.

   For fiscal years ending before December 25, 2015, a Single Audit is required if the subrecipient expends $500,000 or more in federal assistance during its fiscal year and must be conducted in accordance with OMB Circular A-133. For fiscal years ending on or after December 25, 2015, a Single Audit is required if the subrecipient expends $750,000 or more in federal assistance during its fiscal year and must be conducted in accordance with 2 CFR Chapter I, Chapter II, Part 200, Subpart F. The Subrecipient Annual Report is required to be

submitted within 45 days, whether or not a Single Audit is required.

10. **Records Available for Audit:** The Party shall maintain all records pertaining to performance under this agreement. "Records" means any written or recorded information, regardless of physical form or characteristics, which is produced or acquired by the Party in the performance of this agreement. Records produced or acquired in a machine readable electronic format shall be maintained in that format. The records described shall be made available at reasonable times during the period of the Agreement and for three years thereafter or for any period required by law for inspection by any authorized representatives of the State or Federal Government. If any litigation, claim, or audit is started before the expiration of the three year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved.

11. **Fair Employment Practices and Americans with Disabilities Act**: Party agrees to comply with the requirement of Title 21V.S.A. Chapter 5, Subchapter 6, relating to fair employment practices, to the full extent applicable. Party shall also ensure, to the full extent required by the Americans with Disabilities Act of 1990, as amended, that qualified individuals with disabilities receive equitable access to the services, programs, and activities provided by the Party under this Agreement. Party further agrees to include this provision in all subcontracts.

12. **Set Off**: The State may set off any sums which the Party owes the State against any sums due the Party under this Agreement; provided, however, that any set off of amounts due the State of Vermont as taxes shall be in accordance with the procedures more specifically provided hereinafter.

13. T**axes Due to the State**:

    a. Party understands and acknowledges responsibility, if applicable, for compliance with State tax laws, including income tax withholding for employees performing services within the State, payment of use tax on property used within the State, corporate and/or personal income tax on income earned within the State.

    b. Party certifies under the pains and penalties of perjury that, as of the date the Agreement is signed, the Party is in good standing with respect to, or in full compliance with, a plan to pay any and all taxes due the State of Vermont.

    c. Party understands that final payment under this Agreement may be withheld if the Commissioner of Taxes determines that the Party is not in good standing with respect to or in full compliance with a plan to pay any and all taxes due to the State of Vermont.

    d. Party also understands the State may set off taxes (and related penalties, interest and fees) due to the State of Vermont, but only if the Party has failed to make an appeal within the time allowed by law, or an appeal has been taken and finally determined and the Party has no further legal recourse to contest the amounts due.

14. **Child Support**: (Applicable if the Party is a natural person, not a corporation or partnership.) Party states that, as of the date the Agreement is signed, he/she:

    a. is not under any obligation to pay child support; or
    b. is under such an obligation and is in good standing with respect to that obligation; or

c. has agreed to a payment plan with the Vermont Office of Child Support Services and is in full compliance with that plan.

Party makes this statement with regard to support owed to any and all children residing in Vermont. In addition, if the Party is a resident of Vermont, Party makes this statement with regard to support owed to any and all children residing in any other state or territory of the United States.

15. **Sub-Agreements**: Party shall not assign, subcontract or subgrant the performance of this Agreement or any portion thereof to any other Party without the prior written approval of the State. Party also agrees to include in all subcontract or subgrant agreements a tax certification in accordance with paragraph 13 above.

16. **No Gifts or Gratuities**: Party shall not give title or possession of any thing of substantial value (including property, currency, travel and/or education programs) to any officer or employee of the State during the term of this Agreement.

17. **Copies**: All written reports prepared under this Agreement will be printed using both sides of the paper.

18. **Certification Regarding Debarment:** Party certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, neither Party nor Party's principals (officers, directors, owners, or partners) are presently debarred, suspended, proposed for debarment, declared ineligible or excluded from participation in federal programs, or programs supported in whole or in part by federal funds.

    Party further certifies under pains and penalties of perjury that, as of the date that this Agreement is signed, Party is not presently debarred, suspended, nor named on the State's debarment list at: http://bgs.vermont.gov/purchasing/debarment

19. **Certification Regarding Use of State Funds:** In the case that Party is an employer and this Agreement is a State Funded Grant in excess of $1,001, Party certifies that none of these State funds will be used to interfere with or restrain the exercise of Party's employee's rights with respect to unionization.

(End of Standard Provisions)